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EXAMINER'S AMENDMENT

This action is in response to Applicant's amendment filed on 9/17/2009 and an interview between the examiner and Applicant's representative Christopher McKenna, Reg. No. 53,302.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Chris McKenna on 5/7/2010.

The application has been amended as follows:

9. (Currently Amended) A method of pooling by an interface unit a transport layer connection to a server, the method comprising the steps of:

(a) receiving, by an interface unit, a first request of a first client to access a server, the first client and the interface unit communicating via a first transport layer connection;

(b) identifying, by the interface unit, that the interface unit has a second transport layer connection established with the server indicated by the first request;

(c) determining, by the interface unit, from monitoring application layer data of-network traffic between the second client and the server received by the interface unit that a second client and the server have completed transferring a last byte of data of a response ~~are not transferring data~~ for a second client's request via the second transport layer connection;

(d) transmitting, by the interface unit, the first request via the second transport layer connection in response to the determination of step (c) and prior to receiving, by the interface unit, one of a finish command or a reset command ~~from~~ for the second client's connection to the server;

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(e) determining, by the interface unit, from monitoring application layer data of network traffic received by the interface unit that the second client and the server have not completed a transfer of the last byte of data of a second response ~~are transferring data for the~~ to a second request of the second client via the second transport layer connection in response to receiving a third request from one of the first client or the second client to access the server; and

(f) establishing, by the interface unit, a third transport layer connection with the server in response to the determination of step (e).

17. (Canceled)

27. (Currently Amended) An interface unit for pooling a transport layer connection to a server, the interface unit comprising:

means for receiving a first request of a first client to access a server, the first client and the interface unit communicating via a first transport layer connection;

means for identifying that the interface unit has a second transport layer connection established with the server indicated by the first request;

means for ascertaining ~~that a second client and the server~~ from monitoring application layer data of network traffic between the second client and the server received by the interface unit that a second client and the server have completed transferring a last byte of data of a response ~~are not transferring data for a second client's request via the second transport layer connection and transmitting the first request via the second transport layer connection;~~

means for transmitting the first request via the second transport layer connection in response to the means for ascertaining and prior to receiving one of a finish command or a reset command ~~from~~ for the second client's connection to the server;

means for determining from monitoring application layer data of network traffic received by the interface unit that the second client and the server have not completed a transfer of the last byte of data of a second response ~~are transferring data for the~~ to a second request of the second client via the second transport layer connection in response to receiving a third request from one of the first client or the second client to access the server; and

means for establishing a third transport layer connection with the server in response to the determination.

35. (Canceled)

45. (Currently Amended) A method of pooling by an interface unit a transport layer connection to a server, the method comprising the steps of:

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(a) receiving, by an interface unit, a first request of a first client to access a server, the first client and the interface unit communicating via a first transport layer connection;

(b) identifying, by the interface unit, that the interface unit has a second transport layer connection established with the server indicated by the first request;

(c) determining, by the interface unit, from monitoring application layer data of ~~network traffic~~ server responses received by the interface unit that a second client and the server ~~are not transferring data for a second request~~ have not completed a transfer of the last byte of data of a response of the second client via the second transport layer connection;

(d) transmitting, by the interface unit, the first request via the second transport layer connection in response to the determination of step (c) and prior to receiving, by the interface unit, one of a finish command or a reset command for the second client's connection to the server;

(e) determining, by the interface unit, from monitoring application layer data of ~~network traffic~~ server responses received by the interface unit that the first ~~second~~ client and the server have not completed a transfer of a last byte of data of a response to the first request via the second transport layer connection in response to receiving a third request from one of the first client or the second client to access the server; and

(f) establishing, by the interface unit, a third transport layer connection with the server in response to the determination of step (e).

49. (Currently Amended) The method of claim 45, wherein step (e) comprises determining, by the interface unit, via a content length parameter of monitored application layer data that the first ~~second~~ client and the server have not completed transferring data.

50. (Currently Amended) The method of claim 45, wherein step (e) comprises determining, by the interface unit, via one or more chunk-size fields of monitored application layer data that the first ~~second~~ client and the server have not completed transferring data.

51. (Currently Amended) An interface unit for pooling a transport layer connection to a server, the interface unit comprising:

means for receiving a first request of a first client to access a server, the first client and the interface unit communicating via a first transport layer connection;

means for identifying that the interface unit has a second transport layer connection established with the server indicated by the first request;

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means for ascertaining from monitoring application layer data of ~~network traffic~~ server responses received by the interface unit that a second client and the server ~~are not transferring data for a second request~~ have not completed a transfer of the last byte of data of a response of the second client via the second transport layer connection ~~and transmitting the first request via the second transport layer connection;~~

means for transmitting the first request via the second transport layer connection in response to the means for ascertaining and prior to receiving, by the interface unit, one of a finish command or a reset command for the second client's connection to the server;

means for determining from monitoring application layer data of ~~network traffic~~ server responses received by the interface unit that the ~~second~~ first client and the server have not completed a transfer of a last byte of data of a response to the first request via the second transport layer connection in response to receiving a third request from one of the first client or the second client to access the server; and

means for establishing a third transport layer connection with the server in response to the determination.

55. (Currently Amended) The interface unit of claim 51, comprising means for determining, by the interface unit, via a content length parameter of monitored application layer data that the first ~~second~~ client and the server have not completed transferring data.

56. (Currently Amended) The interface unit of claim 55, comprising means for determining via one or more chunk-size fields of monitored application layer data that the first ~~second~~ client and the server have not completed transferring data.

Allowable Subject Matter

Claims 9-13, 15, 16, 18-31, 33, 34, 36-56 are allowed.

The following is an examiner's statement of reasons for allowance:

Independent claims 9, 27, 45, and 51 as amended above now recite a novel method and interface unit for pooling transport layer connections to a server. Specifically, the prior art does not teach, suggest, or render obvious the combination of features found in the independent

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claims. The new language in the claims clarify that the interface unit does not transmit a new request from a first client via the second transport layer connection until two conditions are met: (1) from monitoring application layer data of network traffic between the client and the server, making a determination that the server and client have not yet completed transfer of the last byte of data and (2) prior to the interface unit receiving either a finish command or a reset command for the client's connection to the server.

If those two conditions are met, the interface unit may then send the new request from the first client via the second transport connection that was previously established to send data between a second client and the server. While the prior art teaches a proxy that reuses an available and open connection [see for example, Bhide et al, U.S. Patent No. 5852717, column 6 «lines 23-56»], the prior art does not teach or suggest the proxy reusing the connection (1) after monitoring application layer data to determine that a last byte of data has not been transmitted and (2) prior to receiving a finish command or reset command.

In combination with the other features of the claims, the amended language makes the independent claims allowable over the prior art. The dependent claims are allowed based on their dependency on the parent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOHM CHANKONG whose telephone number is (571)272-3942. The examiner can normally be reached on Monday to Friday [10 am - 6 pm].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu Nguyen can be reached on (571)272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DOHM CHANKONG/
Primary Examiner, Art Unit 2452